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The Role of the Dollar as an International Currency

Peter B. Kenen

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Peter B. Kenen

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The Role of the Dollar As an International Currency

There has been much talk in recent years about the decline of the dollar as an international currency. Some say that it was the inevitable consequence of the decline in the international role of the United States — the end to American hegemony. Some say it was due to avoidable mistakes in US monetary policy — that the inflation of the 1970s undermined international confidence in the dollar. Those who have tried to explain it, however, outnumber those who have tried to measure it, and this paper fills the gap. It collates available information on the uses of the dollar in international trade, in foreign-exchange markets and in international financial markets.

This is an exercise in measurement without theory, but it does come to conclusions. There was some decline in the use of the dollar in international trade shortly after the shift to more flexible exchange rates a decade ago, and I ascribe the decline to that shift, not to the weakness of the dollar in the foreign-exchange markets. There has been some significant decline in the use of the dollar as a reserve asset and thus some movement toward a multiple reserve-currency system. But the dollar is still the dominant currency in the international financial system, even in the reserve system narrowly defined. Paraphrasing Mark Twain's remark on hearing that a newspaper had published his obituary, reports of the death of the dollar are greatly exaggerated.

To organize the evidence surveyed in this paper, I adopt the typology used by Cohen (1971) and Whitman (1974), cross-classifying the uses of

the dollar by function and by sector.[1] It is shown in Figure 1 (page 16). Data are collated on three of these six uses — in the invoicing of trade, the denomination of deposits, loans and bonds, and the definition of parities. Before presenting them, however, I shall comment briefly on the other three.

1. The Dollar as Means of Payment in Foreign-Exchange Markets

If you were in London and wanted to buy Deutschemark with Swiss franc, you would have first to buy sterling with your francs, then buy marks with the sterling. In most major countries, the domestic currency is used as the vehicle for retail trading in foreign currencies, but the dollar is used as the vehicle for wholesale trading. If a British bank wants to buy marks with francs, it has first to buy dollars with its francs and then buy marks with its dollars. In 1979, some 90 to 99 percent of all wholesale trading took place through the dollar in the London, Zurich and Frankfurt markets.[2] Before starting new work on this subject to see if there has been a change, I discussed the situation with central bankers and foreign-exchange dealers. They said that the percentages are similar today. The dollar is still dominant in foreign-exchange trading.

As most foreign-exchange trading goes through the dollar, one should not be surprised to find that the dollar is the principal intervention currency for central banks and governments. This was true a few years ago, and those with whom I raised the subject recently said that it is true today.[3] There is only one large exception, along with a handful of small ones. The large one arises in connection with the exchange-rate arrangements of the European Monetary System.* When an EMS currency reaches the edge of the band set by those arrangements, the participating countries must intervene directly in EMS currencies. They may still use the dollar, however, for discretionary intra-marginal interventions, which they seem to do frequently. The small exceptions arise in less-developed countries. As there are no wholesale markets in many of those countries, the commercial banks that make the retail market can adjust their working balances only by dealing directly with the central bank, which must stand ready to buy and sell all of the major currencies in order to accomodate the commercial banks. These exceptions are not new, however, not in the EMS nor in the less-developed countries. They do not represent a significant change in the use of the dollar for official intervention.

In brief, informal questioning has led me to conclude that there have been no major changes in the role of the dollar as chief vehicle and

* All currencies of the European Economic Community except Great Britain and Greece.

intervention currency in the foreign-exchange markets, and I have not carried the matter farther.

2. The Dollar as Store of Value in the Reserve System

The use of the dollar for official intervention forges a strong link between its role in foreign-exchange markets and its role as an official reserve asset. When a government or central bank intervenes in the foreign-exchange market to keep its country's currency from appreciating, it adds to its foreign-currency reserves, and its new reserves will be dollar balances. Before August, 1971, governments and central banks could sell dollar balances for gold; the US Treasury stood ready (in principle) to sell gold at $35 per ounce. Today, they can buy gold only on the open market (and some of them bought it at the Treasury's gold auctions, held intermittently in 1975-79). But they do not have to keep the dollars they acquire when they intervene in the foreign-exchange markets; they can sell those dollars for other foreign currencies. This is what some of them started to do after the closing of the gold window.

Developing countries were the first to embark on diversification. According to IMF statistics, summarized in Table 1, the share of the dollar in their currency reserves rose from 1973 through 1976, with the "liquidation" of sterling as a reserve currency. (Its share in the currency reserves of developing countries fell from 13 percent early in 1973 to 3 percent at the end of 1976.) Thereafter, however, the share of the dollar fell quite sharply, going from almost 78 percent of currency reserves at the end of 1976 to a low of 58 percent at the end of 1980. There was a small increase in 1981, but the calculations in Table 2 suggest that it was due to the appreciation of the dollar, which reduced the dollar values of other currencies and thus raised the dollar's share in total currency reserves. (I will come back to this matter in another context.)

The developed countries started a bit later and have not gone as far. The share of the dollar in their currency reserves did not begin to fall until 1978, and the fall was not dramatic. The share peaked at 89 percent at the end of 1977 and stood at almost 79 percent four years later.[4] Some developed countries cannot diversify easily — Germany cannot hold Deutschemark, and Japan cannot hold yen. Furthermore, the EMS countries are not supposed to hold significant amounts of their partners' currencies. But the developed countries have probably gone farther than my numbers indicate. For reasons made clear by examples provided below diversification by developing countries can mask the extent of diversification by developed countries.

Let us look at the matter from the other side — at the shares of the new reserve currencies (the Deutschemark, Swiss franc, and yen) — in total currency reserves. Their share in the reserves of developing countries was 12 percent at the end of 1975 and rose to 23 percent at the end of 1981. Their share in the reserves of developed countries remained in the neighborhood of 5 percent through the end of 1977 but rose to 16 percent at the end of 1981.

There have thus been large differences from country to country in the timing and extent of diversification, reflecting differences in attitudes and circumstances. Quoting from the most recent annual report of the International Monetary Fund (IMF, 1982, pp. 65-66):

> Differences in the currency composition of foreign exchange reserves among country groups arise from a number of factors. Historical ties account for the higher shares of the French franc and the pound sterling in the holdings of some developing countries, and regional financial and trade agreements explain the much higher shares of "unspecified" currencies in the portfolios of these countries. For industrial countries, the elements that appear to bear on their reserve asset preferences are the nature of their exchange arrangements and policy objectives (particularly regarding the extent of foreign exchange market intervention), the distribution of their trade flows among the several key currency countries, the currency composition of government borrowing on foreign capital markets, and to some extent, profit and risk considerations. The authorities of many developing countries may be able to give more weight . . . to the ordinary portfolio selection criteria of profit maximization and risk minimization than is possible for the larger industrial countries, whose foreign exchange holdings are so large that the attempt to diversify holdings would tend to upset exchange markets. The currency composition of external payments is, of course, also an important factor affecting the denomination of foreign exchange holdings of these countries. More generally, it can be said that countries — industrial or developing — intervening in US dollars tend to hold, on average, a relatively high proportion of their reserves in that currency in order to reduce transactions costs, even if they peg their currency to a currency basket like the SDR.

A similar list of motives and concerns was given by central banks in answers to a questionnaire produced by the Group of Thirty (*How Central Banks Manage Their Reserves*, 1982, p. 10):

> Nearly all agree that the dollar's almost continuous decline and large exchange rate fluctuations from 1971 onward gave the original impetus to reserve diversification and more active reserve management.
>
> The replies suggest that, once started, the main factor contributing to diversification and more active reserve asset management was the desire of many countries to maintain the real value of their resources at a time of steeply rising liquidity or at least to increase the return on their assets. That became additionally important for commodity producers whose reserves increased substantially after the 1972/73 raw materials' boom and for oil exporters whose reserves rose sharply after the large increases in world oil prices. . . .

> The desire to match foreign exchange liabilities and assets acquired growing importance on changing patterns of trade and even more so because of heavy balance of payments borrowing by many countries after 1973. Several banks also stated that foreign currency matching became important in guiding the direction and extent of diversification rather than originally motivating diversification.

Commercial bankers interviewed in connection with this study stressed the central banks' concerns with returns and risk but said that some of their clients have made mistakes. One respondent spoke of "wild and ill-informed trading" by some of his official clients, saying that they have lost money (*How Central Banks Manage Their Reserves*, 1982, p. 6).

There has been debate about the long-run implications of official diversification — the movement toward a multiple reserve-currency system. Some say that such a system is "inherently" unstable; others say that it will improve the adjustment process by imposing "discipline" on a large number of governments.[5] But it is hard to measure accurately the extent of diversification, let alone to forecast its long-run implications. I am increasingly skeptical about the quality of the published data summarized in Table 1 (page 17) and about the quantity of information they convey. They have serious defects, and they are hard to interpret.

There are two defects in the data. First, some central banks do not report their currency holdings to the IMF (the main source of published data). Second, some governments hold foreign currencies that are not included in their reserves. (Some of these holdings show up in the BIS data on official balances in the Eurocurrency markets. When BIS data on DM holdings in those markets are combined with Bundesbank data on DM holdings in Germany, total official holdings of DM turn out to be much larger than those published by the Fund.)

The problems of interpretation are even more worrisome. I can illustrate them by three examples involving two countries, Germany and Korea, that use the dollar when they intervene in foreign-exchange markets.

1. Both countries start out holding dollars. Germany holds $7 billion. Korea holds $2 billion. Korea decides to diversify and sell $1 billion for DM. Germany buys the dollars to keep its currency from appreciating. Korea winds up with 50 percent of its reserves in dollars, which was its intention, but the share of the dollar in global reserves falls by only 10 percentage points. German reserves rise to $8 billion, and so do German dollar holdings. Korean reserves stay at $2 billion, but Korean dollar holdings fall to $1 billion. Therefore, the share of the dollar in global reserves drops from 100 to 90 percent.[6]

2. The two countries start with the same quantities of dollars and DM that they held at the end of the first example, and the share of the dollar in global reserves is 90 percent. Let Germany run a $4 billion balance-of-

payments deficit (i.e., use $4 billion of dollar reserves to keep the DM from depreciating); let Korea run a $4 billion surplus (i.e., acquire $4 billion of dollar reserves to keep the won from appreciating). Suppose that Korea wants to hold half of its reserves in DM. It must sell $2 billion for DM, and Germany must buy them, as in the first example. German reserves and dollar holdings fall first from $8 to $4 billion, then rise to $6 billion. Korean reserves rise from $2 to $6 billion, and Korean dollar holdings rise in the end to $3 billion. The share of the dollar in global reserves falls from 90 to 75 percent.

3. The two countries start with the same quantities of dollars and DM that they held at the end of the second example. Both hold $6 billion of reserves, but Germany holds only dollars and Korea holds half of its reserves in DM. Let the DM appreciate in terms of the dollar by 50 percent, in response to market forces. If Korea does not sell DM for dollars, the share of the dollar falls. Nothing happens to German reserves, but the dollar value of Korean reserves increases to $7.5 billion on account of the 50 percent increase in the dollar value of its DM holdings. This reduces the share of the dollar in global reserves from 75 to 66⅔ percent.

The term "diversification" has been used to cover all of these events. In the first example, however, there is a clear shift away from the dollar and downward pressure on the dollar in the foreign-exchange market. The amount of diversification, moreover, is larger than the resulting reduction in the share of the dollar, because German reserves grow when Korea diversifies, and Germany cannot diversify its own reserves in this two-currency case. In the second example, there is no shift in asset preferences. The decline in the share of the dollar is due to a redistribution of reserves from a country having a high dollar share to one having a low dollar share. In the third example, there is again a shift away from the dollar, as Korea does not buy them to avoid a change in the composition of its currency reserves, but it does not involve official dollar sales in the foreign-exchange market.

We can be sure that there has been outright diversification of the sort illustrated by the first example — sales of dollars for other currencies. We cannot know how much there has been, however, without access to data on currency holdings by individual countries. We can likewise be sure that some of the changes in currency shares were due to changes in exchange rates; in 1981, for instance, total dollar holdings fell, but the appreciation of the dollar raised its share in total currency reserves (see Table 2, pages 18 and 19).

In their answers to the survey by the Group of Thirty, quoted earlier, central bankers said that diversification started when the dollar weakened on the foreign-exchange markets, but it was perpetuated by other motives, including the increase of uncertainty that they traced to the advent of

floating exchange rates.[7] The work I have done on other uses of the dollar underscores the need to draw this distinction. Changes in the use of the dollar in international trade and in international financial markets are more readily explained by the increase of uncertainty resulting from the change in the exchange-rate regime than by fluctuations in actual exchange rates.

3. The Dollar as Unit of Account in International Trade

Research on the use of the dollar in international trade was begun by Grassman (1976).[8] He showed that the Swedish kronor is the currency most often used to invoice Swedish exports; the dollar came in second but was very far behind, and sterling was less important than the mark. His study, however, dealt with the just one year. It did not trace changes in the use of the dollar. Studies for other industrial countries must be used instead. They are summarized in Tables 3 and 4 (pages 20 and 21).

In all instances, the data confirm Grassman's finding. The exporter's own currency is more important than the dollar. In most instances, moreover, the exporter's currency became more important between 1972 and 1976, and the importance of the dollar fell. The story on the import side is striking, too. One would not expect the importer's currency to dominate the data; it should not be more important than the exporters' currencies in invoicing imports from the industrial countries, given the large roles of the exporters' currencies shown by the export data. Nevertheless, the importer's currency dominates the data in three of the six cases in Table 3, and the dollar dominates the importer's currency in only one such case.[9]

The decline in the role of the dollar that took place on the export side is frequently ascribed to the depreciation of the dollar that started in 1971. The data do not support this explanation. In all six cases covered by Table 3, the share of the dollar fell after the dollar began to depreciate. But look at the annual data in Table 4. In most cases shown there, the share of the dollar was slow to recover when the dollar appreciated, and the recovery was incomplete (the share of the dollar was lower in 1976 than in 1971 or 1972). More telling, there is just one case (Belgium) in which the share of the dollar dropped significantly in or after 1977, when the dollar started to depreciate again. In the German case, the share of the dollar rose after 1976, and the increase took place at the expense of the mark. The Danish, French and Dutch cases are similar.[10] It would therefore appear that the decline in the use of the dollar in international trade reflected the increase of uncertainty attending the change in the exchange-rate regime.

What can be said about the use of the dollar in invoicing trade with the United States and with third countries? In bilateral trade between Germany and the United States, Scharrer (1980) finds that the exporter's currency

dominates. Yet the share of the dollar in German exports to the United States is higher than its share in German exports to other countries (and much higher than in German exports to other industrial countries); see Table 5 (page 22). I have pieced data together from several sources to calculate the share of the dollar in several countries' exports. My calculations are displayed in Table 6 (page 23) and can be summarized this way:

Share of Dollar in Exports of	Exports to	
	United States	Other Countries
Belgium	57	10
France	45	8
Germany	34	3
Italy	46	27
Japan	89	75
Netherlands	68	11
United Kingdom	52	12

The share of the dollar is fairly large in the invoicing of exports to the United States. With one exception (Japan), it is fairly small in the invoicing of exports to third countries.[11]

The dollar is still used extensively in the invoicing of exports by the less-developed countries. Figures for German imports from those countries are shown in Table 5. The share of the dollar in imports from Latin America is above 75 percent; its share in imports from Africa and Asia is above 50 percent; and its share in imports from Arab oil-exporting countries is about 95 percent, reflecting the use of the dollar in the oil market.[12] Page (1981) has tried to estimate the share of the dollar in the invoicing of world trade. She finds that it is used to invoice 55 percent, with 32 percentage points provided by third-country trade. Some two-thirds of third-country use is, in turn, contributed by exports from the less-developed countries, with oil trade accounting for a large part of that contribution.

4. The Dollar as Store of Value in International Financial Markets

I turn next to the role of the dollar as store of value in the Eurocurrency and Eurobond markets. I am not concerned here with the share of the dollar in optimal or actual portfolios. Eurocurrency statistics cannot say much about those shares, because big pieces are omitted from each data set.[13] They cannot say much about the banks' portfolios and can say even less about their customers' portfolios. There are additional problems, including

two illustrated earlier in this paper. Many banks participate in the Euromarkets; and it would be foolish to suppose that they are identical in needs or preferences. Therefore, the share of the dollar in bank claims can be affected by the distribution of those claims — by the relative size and number of participants having a strong preference for dollar claims. It is also affected by exchange rates. My work has focused on that issue.

The basic Eurocurrency statistics are displayed in Tables 7 and 8. (Pages 24 and 25.) They appear to show a significant decline in the importance of the dollar.[14] Its share in total Eurocurrency claims fell from 77 percent in 1970 to a low of 67 percent in 1978 and stood at 71 percent at the end of 1981. Its share in claims on nonbanks traced a similar path.[15] These figures, however, measure nondollar claims in dollar equivalents and are therefore affected by the large exchange-rate change that took place in the 1970s.

There are several ways to deal with this problem, including the one illustrated in Table 2, which is concerned with foreign-currency reserves. I have used two methods here. Both start by converting nondollar data back into national currency units. The first method reconverts them into dollar equivalents using constant exchange rates and computes percentages analogous to those in Table 8. The second method keeps them in national currency units and calculates the rate of growth in the use of each currency. Both methods were used to study the use of the dollar in the Eurocurrency market; the results are shown in Tables 9 and 10. (Pages 26 and 27.) The second method was used to study the use of the dollar in the Eurobond market; the results are shown in Tables 11 and 12.[16] (Pages 28 and 29.)

Shares of the dollar in Eurocurrency claims appear again in Table 9. The numbers in the first column of this table resemble those in the first column of Table 8; they show the share of the dollar measured at current exchange rates. (They differ from the numbers in Table 8 because they omit nondollar claims in currencies other than the Deutschemark, Swiss franc, pound sterling and French franc, for want of adequate information about those claims.) The numbers in the second column of Table 9 are the shares of the dollar calculated at constant (1975) exchange rates. As nondollar currencies were worth more at 1975 rates than they were at 1970 rates, the share of the dollar begins at a lower level in the second column. Furthermore, it falls in 1971, after the first devaluation of the dollar. It rises in 1972, however, is higher in 1973 than it was to start, and it continues to rise thereafter. On this calculation, the dollar became increasingly important.

The second method gives a similar result. Here are the average rates of growth in Eurocurrency claims measured in national currency units:

US dollar	23.1
Deutschemark	20.0

Swiss franc	15.6
Pound sterling	39.7
French franc	21.6

There has been no significant decline in the use of the dollar to denominate bank claims. The rate of growth in the quantity of dollar claims was larger than the rates of growth in Deutschemark, Swiss franc and French franc claims. Furthermore, the growth rate of dollar claims was much more stable; its variance was smaller than those of other growth rates. In brief, the apparent decline in the use of the dollar shown by Table 8 was due to valuation changes, not a shift to the use of other currencies.[17]

Turning to new issues in the Eurobond market, the shares of dollar issues in total issues measured at current and constant exchange rates are shown in Table 12. Let us look at the series that exclude bonds issued by US borrowers but include those issued by international institutions.

When measured at current exchange rates, the share of dollar issues was lower in the last three years before the sharp recovery of the dollar (1977-79), than it was in the first three years of dollar weakness (1971-73); it averaged 60.3 percent in the former period and 66.8 percent in the latter. When measured at constant exchange rates, the share is lower at the start of the period, falls in years when the dollar weakened sharply (1971, 1977, and 1978), but was higher in 1977-79 than it was in 1971-73, averaging 64.7 percent and 61.4 percent respectively. The use of the dollar is sensitive to exchange-rate fluctuations, but it has not diminished over time.

Standing back from the details, it would seem right to draw these general conclusions:

1. The role of the dollar in international financial markets has not fallen sharply in recent years. There is thus no urgent need to defend it, even if that role is deemed to be important to the interests of the United States. There has been some significant movement toward a multiple-currency monetary system and, more narrowly, a multiple-currency reserve system, but that tendency has not cut deeply into the use of the dollar as a store of value in international financial markets.

2. It is clear, nonetheless, that periods in which the dollar was weak saw temporary cutbacks in its use, especially in the Eurobond market. These in turn probably intensified its weakness, as well as interfered with the smooth functioning of the markets themselves. Greater exchange-rate stability could therefore contribute to the long-term usefulness of the dollar as an international currency.

5. The Dollar as Unit of Account in Setting Parities

Finally, I have studied the use of the dollar as a unit of account in the official sector of the monetary system — its use in setting parities for

national currencies — by examining the exchange-rate regimes of less-developed countries. The results are summarized in Table 13. (Page 30.)

There has been a sharp decline in the use of the dollar as the unit of account for pegging exchange rates. In 1974, 61 of 98 countries covered by my survey pegged their currencies to the dollar, and their imports accounted for 72 percent of the total imports of the 98 countries. During the next seven years, 33 comparatively large countries "defected" from this group. Nine countries joined the group, but they were comparatively small. By 1981, then, only 37 countries pegged their currencies to the dollar, with their imports accounting for just 20 percent of the total imports of the 115 countries covered by my survey.

It should be noted, however, that none of the "defectors" adopted another national currency for pegging (and that there were defectors from other currencies, too). Most of the defectors adopted basket pegs, indicators and other exchange-rate regimes (including some that let their currencies float). The change in the role of the dollar as a unit of account was a by-product of the move to more flexible exchange rates on the part of less-developed countries — a move mirroring the one by developed countries.

The decline in this use of the dollar looks to be larger than the decline in any other use. But it is not especially important for the functioning of the system or for the role of the dollar in the system. The interesting issue comes up tangentially. The exchange-rate practices of less-developed countries are more important than their exchange-rate regimes in determining effective exchange rates for them and for their trading partners. It would therefore be useful to examine their policies, especially those of the NICs, from this standpoint. The effective exchange rate for the dollar may be influenced more heavily by countries that peg to the dollar but change their pegs frequently than by those that peg to baskets but give large weights to the dollar or by those that do not peg at all but manage their currencies in ways that keep their dollar rates quite stable.

NOTES

[1] Different typologies are used by Krugman (1980) and Magee and Rao (1980) in their work on "vehicle currencies" in international trade. Their papers, however, blur the important distinction between the use of a currency in foreign-exchange trading and its use in the conduct of merchandise trade. Economies of scale can be achieved by using a single currency as vehicle for foreign-exchange trading. The number of price quotations can be minimized; the frequency of trading can be maximized; and risk management is simplified. Therefore, as noted below, the dollar continues to serve as the main vehicle currency in foreign-exchange markets. But the same economies are not necessarily realized by using a single currency in merchandise trade — not as a unit of account nor as a means of payment.

[2] The figure for Paris was 60 percent, down from 70 percent in 1970. These data come from

central banks and were published in, *Foreign Exchange Markets Under Floating Rates*, Group of Thirty (1980), p. 15.

[3] See also, *How Central Banks Manage Their Reserves*, Group of Thirty (1982), which summarizes central-bank replies to a questionnaire and says that the dollar is the "only intervention currency for all practical purposes " (p. 4).

[4] These figures and the ones in Table 1 minimize the apparent decline in the share of the dollar because they include, in dollar holdings and in total currency reserves, the dollar equivalents of the European Currency Units (ECU) issued against dollars in the EMS. When one goes to the opposite extreme, treating *all* ECU as currency reserves, even those issued against gold, the share of the dollar declines more dramatically; it goes from 89 percent of currency reserves at the end of 1977 (when there were no ECU) to a low of 54 percent at the end of 1980, then rises to 56 percent at the end of 1981. (These and additional figures are given in the notes to Table 1.)

[5] For more on these arguments, see Kenen (1981a).

[6] By adding another country to this example, one can illustrate a point made in the text, that diversification by developing countries can mask the extent of diversification by developed countries. Start as before, with German reserves at $7 billion, Korean reserves at $2 billion, and all reserves in dollars. Suppose that Sweden starts with $5 billion of reserves, which are also invested in dollars. Let Sweden switch $2 billion into DM (with Germany buying the dollars). If this were the only instance of diversification, the share of the dollar in global reserves would fall to 7/8 or 87.5 percent, and its share in the reserves of developed countries (Germany plus Sweden) would fall to 6/7 or 85.7 percent. Now let Korea diversify too, switching $1 billion into DM (with Germany buying the dollars again). The share of the dollar in global reserves would fall to 14/17 or 82.4 percent, but its share in the reserves of developed countries would go back up to 13/15 or 86.7 percent.

[7] One central banker pointed out that periods of dollar strength could induce additional diversification, instead of discouraging it, because central banks could move out of the dollar "with more ease and less embarrassment to the United States" (*How Central Banks Manage Their Reserves*, Group of Thirty, 1982, p. 11).

[8] Page (1981) cites earlier work at the IMF and gives a good survey of the literature; see also Page (1977).

[9] In one of the remaining cases (Denmark), the importer's currency was a bit more important in 1976; in the other (the Netherlands), the dollar overtook the importer's currency in 1979. Note that the share of the dollar rises on the import side from 1972 to 1976 (and goes on rising in two cases). This is probably due to the influence of the increase in the price of oil, as oil is typically traded against dollars.

[10] The Japanese data tell a different story. The share of the dollar in Japanese exports fell sharply in 1975-1980, but it was unusually high initially; see Kenen (1981b), Table 4.

[11] My figures for exports to the United States come from a study by Makin cited in Magee and Rao (1980). The one for Germany is higher than Scharrer's figure shown in Table 5, and those for Belgium and France are lower than the ones in Page (1981). My figures for exports to third countries are deduced from other numbers but may not be far off. Here are the shares of the dollar in Belgian and French exports reported in Page (1981):

Destination	Belgium	France
Denmark	4	7
Germany	2	3
Italy	6	4
Japan	49	14
Netherlands	3	6
Norway	3	5
Sweden	5	12
United Kingdom	22	6

Most of these numbers are smaller than my own, but they pertain to trade with industrial countries. The share of the dollar is higher in exports to the less-developed countries. Data

for Germany are shown in Table 5, and Page (1981) gives these numbers for Britain:

Exports to non-oil countries	11
Exports to oil-exporting countries	4

[12] Page (1981) reports these figures for British imports:

Imports from non-oil countries	37
Imports from oil-exporting countries	86

[13] The claims of the Eurobanks, for example, omit foreign-currency claims on residents and all claims denominated in domestic currency. Furthermore, they omit the claims of home and branch offices domiciled outside the BIS reporting area. Thus, they include the dollar claims of US banks in London but omit their sterling claims, and they exclude the claims of the banks' head offices in the United States. For additional examples, see Kenen (1982a).

[14] I concentrate here on the banks' claims; their liabilities tell the same sort of story. See Kenen (1982a), Table 2.

[15] The share of the dollar tends to be higher in claims on banks than on nonbanks, and it is especially high in claims reported by British banks (see Kenen, 1982a, Table 7). I was thus led to look at the interbank market for an explanation of both phenomena. I was wrong. The dollar *is* used heavily in the interbank market, accounting for some 75 percent of total interbank liabilities at the end of 1980. But much of the interbank market, strictly defined, is excluded from the BIS data used in this paper; claims of banks on other banks in London are treated as claims on residents, not on foreigners.

[16] The first procedure cannot be used too well in work on the Eurobond market because year-to-year fluctuations in issues are very large.

[17] There is, of course, a danger in using quantities to measure changes in currency use. Suppose that governments issue huge quantities of dollar debt. (The US government can do so to finance a budget deficit. Other governments can do so, too. In fact, Eurocurrency claims on nonbanks include large quantities of dollar debt issued by the governments of less-developed countries.) The role of the dollar measured by the quantity of dollar debt has to rise somewhere in the system — someone has to hold it. But the dollar may depreciate in the process. On this view, the use of the dollar reflects the quantity of dollar debt issued and should not be measured at constant exchange rates. I cannot rule out this interpretation, but I have doubts about its relevance. It would hold strictly in respect of "outside" debt. Eurocurrency claims should probably be treated as "inside" debt, even though much of it is issued by governments. The decision to denominate that debt in dollars is not taken independently by the debtor; it is taken jointly by debtor and creditor. (We know very little about the process, however, and someone should probably look at it carefully.)

Figure 1.
The Uses of the Dollar as an International Currency

Function	Sector Private	Official
Unit of Account	Currency used in invoicing merchandise trade	Currency used in defining parities
Means of Payment	Vehicle currency in foreign-exchange markets	Intervention currency in foreign-exchange markets
Store of Value	Currency in which deposits, loans, and bonds are denominated	Currency in which reserves are held

Table 1

Shares of National Currencies in Identified Official Holdings of Foreign Exchange

(Ends of Years 1975 through 1981)

Country Group and Currency	1975	1976	1977	1978	1979 [a]	1980 [a]	1981 [a]
All Countries							
US dollar	79.4	79.6	79.4	76.9	73.8	68.3	70.6
Pound sterling	3.9	2.0	1.6	1.5	1.9	2.9	2.3
Deutschemark	6.3	7.0	8.3	9.9	11.5	13.9	12.5
Swiss franc	1.6	1.4	2.0	1.4	2.3	3.1	2.8
Japanese yen	0.5	0.7	1.2	2.5	2.9	3.8	4.1
Other currencies[1]	1.8	1.4	1.4	1.4	1.7	2.2	2.1
Unspecified	6.5	7.9	6.2	6.3	5.9	5.8	5.6
Industrial Countries							
US dollar	87.3	86.9	89.0	86.2	83.5	77.9	78.9
Pound sterling	1.1	0.7	0.5	0.5	0.6	0.6	0.6
Deutschemark	4.0	3.8	4.0	6.6	7.5	12.4	11.3
Swiss franc	0.9	0.9	0.7	0.4	1.3	1.5	1.5
Japanese yen	0.2	0.4	0.3	1.6	2.0	2.8	3.1
Other currencies[1]	0.4	0.5	0.2	0.3	0.4	0.5	0.7
Unspecified	6.2	7.0	5.1	4.4	4.5	4.2	3.9
Developing Countries							
US dollar	70.8	72.7	68.6	62.6	62.6	58.1	61.7
Pound sterling	6.8	3.2	2.8	3.0	3.4	5.3	4.1
Deutschemark	8.8	10.1	12.9	15.0	16.1	15.4	13.8
Swiss franc	2.3	1.9	3.4	2.9	3.3	4.8	4.3
Japanese yen	0.9	1.1	2.2	4.0	4.0	4.9	5.2
Other currencies[1]	3.3	2.4	2.7	3.1	3.0	3.9	3.6
Unspecified	7.1	8.6	7.4	9.3	7.5	7.6	7.3

Source: IMF (1982), Table 18.

[1] French franc and Dutch guilder.

[a] The dollar and total currency reserves of all countries include the dollar equivalents of the European Currency Units (ECU) issues against dollars; the ECU issued against gold are excluded entirely. When *all* ECU are treated as currency reserves, the figures for the industrial countries look this way:

Asset	1979	1980	1981
US dollar	62.2	54.3	55.9
ECU	24.0	29.0	26.9
All other and unspecified	13.8	16.7	17.1

Table 2

Quantity and Price Changes Affecting the Share of the Dollar in Total Official Holdings of Foreign Exchange, 1977-1981

(in Billions of SDR)

Item	1977	1978	1979	1980	1981
Total of Identified Currency Reserves					
Value at end of previous year	139.5	177.7	197.5	222.7	266.3
Increase in quantity	42.6	28.2	21.0	23.6	− 10.5
Value at end of current year before price change	182.1	205.9	218.5	246.4	255.8
Effect of price change	− 4.4	− 8.4	4.2[a]	20.0[a]	9.8[a]
Value at end of current year	177.7	197.5	222.7	266.3	265.6
US dollar					
Value at end of previous year	120.6	150.4	162.1	147.0	156.2
Increase in quantity	36.3	22.3	− 13.7[b]	4.2	− 8.7
Value at end of current year before price change	156.9	172.7	148.4	151.2	147.4
Effect of price change	− 6.5	− 10.6	− 1.4	5.0	15.0
Value at end of current year	150.4	162.1	147.0	156.2	162.4

Table 3

Quantity and Price Changes Affecting the Share of the Dollar in Total Official Holdings of Foreign Exchange, 1977-1981
(in Billions of SDR)

Share of US Dollar in Total of Identified Currency Reserves					
End of previous year	86.4	84.6	82.1	66.0	58.6
End of current year					
Before effect of price change	86.1	83.9	67.9	59.7	57.6
After effect of price change	84.6	82.1	66.0	58.6	61.1
Memorandum: Share of US dollar in all currency reserves at end of current year	79.4	76.9	62.4	55.9	58.4

Source: IMF (1982), Table 17, and own calculations. Data are not comparable to those in Table 1, because they include all ECU as currency reserves and exclude reserves in "unspecified" currencies; the share of the dollar in all currency reserves, including all ECU and reserves in "unspecified" currencies, are shown in the memorandum. The Fund calculates quantity changes quarterly; the quarterly change in each currency component is multiplied by the average of the SDR prices of the currency at the beginning and end of each quarter. As the annual changes are the sums of the quarterly changes, they are not free of price effects; they include the effects of changes from quarter to quarter in the averages of SDR prices used to obtain the quarterly changes in quantity. Nevertheless the crude division between quantity and price effects shows that there was some diversification away from the dollar in 1977-80 (that the decrease in the share of the dollar was not due totally to price effects) and that the process did not end in 1980 (that the increase in the share of the dollar in 1981 *was* due totally to price effects).

[a] Includes effect of change in SDR equivalent of gold price used in EMS to value the ECU issued against gold.

[b] Mainly due to transfer of dollars from national reserves to the European Monetary Cooperation Fund in connection with the issue of ECU.

Table 3

Currency Distributions of Exports and Imports, *Selected Years*

Country and Year	Exports			Imports		
	Exporter's Currency	US Dollar	All Other	Importer's Currency	US Dollar	All Other
Belgium:						
1972	47.3	11.9	40.8	29.9	18.3	51.8
1976	47.8	12.0	40.2	26.5	25.1	48.4
1979	44.2	12.5	43.3	28.4	23.4	48.2
Denmark:						
1972	46.0	16.0	37.0	21.0	21.0	58.0
1976	54.0	14.0	32.0	25.0	23.0	52.0
1979	51.0	16.0	33.0	27.0	27.0	46.0
France:						
1972	59.4	10.3	30.3	31.5	15.6	52.9
1976	68.3	9.4	22.3	31.5	29.1	39.4
1979	62.4	11.6	26.0	35.8	28.7	35.5
Germany:						
1972	84.1	6.5	9.4	49.9[a]	18.6[a]	31.5[a]
1976	86.9	5.0	8.1	42.0[a]	31.3[a]	26.7[a]
1979	82.6	7.2	10.2	43.7[a]	30.5[a]	25.8[a]
Italy:						
1972	50.7[a,b]	28.3[a,b]	21.0[a,b]	22.5[a,b]	32.1[a]	45.4[a]
1976	39.1[a]	27.9[a]	33.0[a]	16.0[a]	42.5[a]	41.5[a]
1979	na	na	na	na	na	na
Netherlands:						
1972	44.2	13.2	42.6	24.3	17.7	58.0
1976	50.2	13.0	36.8	31.4	22.7	45.9
1979	42.9	19.0	38.1	29.1	31.5	39.4

Sources: Data for all countries except Italy from Page (1981) and additional tables supplied by Ms. Page. Data for Italy from Scharrer (1980).

[a] Based on payments data.

[b] 1971.

Table 4

Currency Distributions of Exports, 1971-1980

Country and Currency	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980[a]
Belgium:										
Exporter's currency	46.2	47.3	49.9	53.0	50.9	47.8	45.8	44.4	44.2	40.4
US dollar	14.5	11.9	9.7	8.2	10.0	12.0	14.6	12.6	12.5	13.8
Other currencies	39.3	40.8	40.4	39.7	39.1	30.2	39.6	43.0	43.3	45.8
Denmark:										
Exporter's currency	41.0	47.0	52.0	54.0	54.0	54.0	53.0	53.0	51.0	47.0
US dollar	22.0	16.0	15.0	14.0	13.0	14.0	16.0	16.0	16.0	14.0
Other currencies	37.0	37.0	33.0	32.0	33.0	32.0	31.0	31.0	33.0	39.0
France:										
Exporter's currency	na	59.4	66.4	68.3	69.1	68.3	65.4	64.1	62.4	na
US dollar	na	10.3	8.7	8.8	8.2	9.4	10.9	11.2	11.6	na
Other currencies	na	30.3	24.9	22.9	22.7	22.3	23.7	24.7	26.0	na
Germany:										
Exporter's currency	na	84.1	85.5	88.3	89.2	86.9	86.0	83.6	82.6	82.3
US dollar	na	6.5	5.3	3.8	4.4	5.0	6.2	7.4	7.2	7.2
Other curriencies	na	9.4	9.2	7.9	6.4	8.1	7.8	9.0	10.2	10.5
Netherlands:										
Exporter's currency	44.4	44.2	45.3	46.3	50.0	50.2	48.6	49.4	42.9	43.5
US dollar	16.7	13.2	10.1	13.2	15.0	13.0	15.8	11.9	19.0	16.5
Other currencies	38.9	42.6	44.6	40.5	35.0	36.8	35.6	38.7	38.1	40.0

Source: See Table 3.

[a] For Germany, first three calendar quarters; for other countries, first half year.

Table 5

Distributions of German Trade by Currency and Partner, 1979

Partner	Deutschemark	US dollar	All Other
German Exports:			
EC countries	81.0	2.4	16.6
Other Western Europe	86.4	3.6	10.0
Eastern Europe	82.4	16.4	1.2
United States	75.6	24.3	0.1
Canada	42.9	4.9	52.2
Japan	80.7	2.8	16.5
Australia, etc.	89.7	7.0	3.3
Africa	93.8	5.2	1.0
Latin America	83.8	16.2	—
Asia	87.9	9.3	2.8
Memorandum:			
Arab oil producers	92.3	6.0	1.7
German Imports:			
EC countries	53.5	13.8	32.7
Other Western Europe	54.0	23.4	22.6
Eastern Europe	90.4	8.7	0.9
United States	11.3	73.9	14.8
Canada	9.4	63.8	26.8
Japan	45.3	13.4	41.3
Australia, etc.	33.5	43.7	22.8
Africa	26.6	55.7	17.7
Latin America	18.4	77.9	3.7
Asia	29.4	51.5	19.1
Memorandum:			
Arab oil producers	3.9	95.6	0.5

Source: Scharrer (1980); data for first half of calendar year.

Table 6

The Role of the Dollar in the Export Trade of Major Industrial Countries, 1976

Item	Belgium	France	Germany	Italy	Japan	Netherlands	United Kingdom
1. Percentage of total exports invoiced in dollars	12.0	9.4	5.0	27.9[a]	78.5[b]	13.0	15.5[c]
2. Percentage of exports to United States invoiced in dollars	57.0	45.0	34.0	46.0	89.0	68.0	52.0
3. Exports to United States as percentage of total exports	3.6	4.6	5.6	6.5	23.6	2.9	9.4
4. Exports to other countries as percentage of total exports	96.4	95.4	94.4	93.5	76.4	97.1	90.6
5. Computed percentages of total exports invoiced in dollars							
a. Exports to United States	2.1	2.1	1.9	3.0	21.0	2.0	4.9
b. Exporters to other countries	9.9	7.3	3.1	24.9	57.5	11.0	10. 6
6. Computed percentage of exports to other countries invoiced in dollars	10.3	7.6	3.3	26.6	75.3	11.3	11.7

Sources: Data on line (1) from sources for Table 3 and from Kenen (1981b), Table 4. Data on line (2) from unpublished study by Makin reproduced in Magee and Rao (1980); pertain to 1975. Data on line (3) from Scharrer (1980). Data on line (4) are the complements to the entries on line (3). Data on line (5a) are the products of the entries on lines (2) and (3). Data on line (5b) are the differences between the entries on lines (1) and (5a). Data on line (6) are the entries on line (5b) divided by the entries on line (4).

[a] Based on payments data.

[b] Based on letters of credit; data for 1975.

[c] Unweighted average of data for first and second halves of 1976.

Table 7

Foreign Currency Claims on Nonresidents Reported by European Banks

(Billions of US dollars at End of Year)

	Total			On Nonbanks		
Year	Total	Dollars	Other	Total	Dollars	Other
1970	78.3	60.4	17.9	16.6	11.9	4.7
1971	100.1	71.5	28.6	21.2	14.4	6.8
1972	131.8	98.0	33.8	26.3	18.3	8.0
1973	187.6	132.1	55.5	38.7	24.7	14.0
1974	215.2	156.2	58.9	53.1	35.0	18.1
1975	258.2	190.2	68.0	61.4	40.9	20.5
1976	305.3	224.0	81.3	73.5	50.8	22.7
1977	384.8	268.4	116.4	97.2	65.6	31.7
1978	502.0	339.5	162.5	127.2	84.3	43.0
1979	639.8	428.0	211.8	156.5	104.3	52.1
1980	751.2	518.7	232.5	193.5	131.6	61.9
1981	839.0	592.5	246.5	230.9	159.7	71.2

Source: BIS (various years). When two figures are given for a single year, the later (revised) one is used here. When calculating changes, however, the earlier (initial) figure is used to obtain the change from the previous year, and the later (revised) figure is used to obtain the next change. Significant changes in coverage occur in 1973, 1974, and 1977.

Detail may not add to total because of rounding.

Table 8

Foreign Currency Claims on Nonresidents Reported by European Banks

(Dollar Claims as Percentages of Totals at End of Year)

Year	Total	On Nonbanks
1970	77.1	71.7
1971	71.4	67.9
1972	74.3	69.6
1973	70.4	63.8
1974	72.6	65.9
1975	73.7	66.6
1976	73.4	69.1
1977	69.7	67.5
1978	67.6	66.3
1979	66.9	66.6
1980	69.0	68.0
1981	70.6	69.2

Source: Table 7.

Table 9

Foreign Currency Claims on Nonresidents Reported by European Banks
(Dollar Claims as Percentages of Totals at End of Year Measured at Current and Constant Exchange Rates)

Year	Current Exchange Rate	Constant Exchange Rate
1970	75.3	67.4
1971	69.8	63.4
1972	72.4	67.0
1973	72.0	69.4
1974	74.7	75.0
1975	75.5	74.6
1976	75.8	76.2
1977	72.3	75.2
1978	71.1	76.7
1979	70.2	76.7
1980	72.5	76.8
1981	75.4	78.0

Source: The data on which this table is based come from the same source as those in Table 7. The dollar shares at current exchange rates are similar to those in Table 8 but omit from nondollar claims those in currencies other than the Deutschemark, Swiss franc, pound sterling, and French franc. The dollar shares at constant exchange rates are obtained by converting the dollar equivalents of nondollar claims into their own units, using end-of-year exchange rates from *International Financial Statistics*, then converting back into dollar equivalents at the average-in-year exchange rate for 1975. Data relate to total claims, not to those on nonbanks alone (for which there are no published data for currencies other than the dollar).

Table 10

Foreign Currency Claims on Nonresidents Reported by European Banks

(Percentage Rates of Change in Selected Assets Measured in National Currency Units)

Year	US dollars	Deutsche-mark	Swiss francs	Pounds sterling	French francs
1971	18.4	43.7	46.1	149.0	15.9
1972	37.1	23.2	−8.3	46.3	40.1
1973	36.5	30.0	61.1	46.0	−77.0
1974	17.1	−1.7	−25.2	−34.5	−20.6
1975	21.7	29.6	10.4	13.8	75.2
1976	17.8	5.4	8.7	29.0	10.8
1977	17.1	23.6	2.7	83.9	20.5
1978	26.5	20.3	−4.4	28.8	51.9
1979	26.0	21.0	35.2	39.4	32.9
1980	21.2	11.8	43.0	8.6	65.9
1981	14.4	12.6	23.4	26.4	na
Average[a]	23.1	20.0	17.4	39.7	21.6
Average[b]	23.1	19.9	15.6	34.9	9.0

Source: The data on which this table is based come from the same source as those in Table 7, but the figures for currencies other than the dollar have been converted from dollar equivalents into their own units. Thus, the percentage changes in Deutschemark claims shown in the second column are the changes in the *number* of Deutschemark represented by those claims, not in the dollar equivalents. Conversions were made using end-of-year exchange rates in *International Financial Statistics*. Data relate to total claims, not to those on nonbanks alone (for which there are no published data for currencies other than the dollar).

[a] Simple average of annual changes.

[b] Compound rates of change (inclusive of changes due to changes in coverage of BIS data).

Table 11

Eurobond Issues

(Billions of US Dollars)

Issuer and Currency	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
All Issuers:												
US dollars	1.96	2.24	4.31	2.89	3.08	4.92	10.00	12.34	7.69	10.21	13.30	21.25
Deutschemark	0.60	0.86	1.23	1.00	0.64	2.89	2.82	5.22	6.53	4.77	3.46	1.38
Other	0.43	0.66	1.39	0.71	0.80	2.50	2.55	1.92	1.72	2.37	3.29	3.86
US Issuers:												
US dollars	0.63	1.00	1.77	0.71	0.10	0.22	0.40	1.19	0.97	2.78	3.96	5.70
Deutschemark	0.05	0.09	0.09	0.05	—	—	—	0.01	0.23	0.06	0.12	0.03
Other[a]	0.09	0.02	0.17	0.06	0.01	0.09	—	0.10	0.09	0.03	0.31	0.12
International Institutions:												
US dollars	0.06	0.07	0.68	0.65	1.83	1.06	2.25	1.98	1.81	0.70	1.36	1.70
Deutschemark	—	—	0.01	0.02	0.16	0.34	0.67	0.24	0.82	1.09	—	0.04
Other[a]	0.08	0.06	0.20	0.22	0.08	0.08	0.17	0.26	0.24	0.25	0.35	0 .75
Dollar Issues as Percentages of Total Issues												
All Issuers	65.5	59.6	62.2	62.8	68.1	47.2	65.1	63.3	48.2	58.8	66.3	80.2
All Except US	59.9	46.8	51.8	57.7	67.6	46.4	64.1	61.3	45.9	51.3	59.6	80.7
All Except US & International	61.3	46.4	46.4	52.9	49.1	42.0	61.9	58.4	41.7	54.1	57.2	76.3

Source: BIS (various issues).

[a] Calculated as residual.

Table 12

Eurobond Issues in Dollars and Deutschemark at Current and Constant Exchange Rates

(Billions of US Dollars)

Issuer and Currency	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
All Issuers Except US												
US dollars	1.34	1.24	2.54	2.18	2.98	4.61	9.60	11.15	6.72	7.43	9.34	15.55
Deutschemark	0.55	0.77	1.14	0.95	0.64	2.89	2.82	5.21	6.30	4.71	3.34	1.35
Deutschemark at constant exchange rate	0.81	1.09	1.48	1.03	0.67	2.89	2.89	4.92	5.14	3.51	2.47	1.24
All Issuers Except US & International												
US dollars	1.28	1.17	1.86	1.53	1.15	3.53	7.35	9.17	4.91	6.73	7.98	13.85
Deutschemark	0.55	0.77	1.13	0.93	0.48	2.55	2.15	4.97	5.48	3.62	3.34	1.31
Deutschemark at constant exchange rate	0.81	1.09	1.46	1.01	0.51	2.55	2.20	4.69	4.47	2.70	2.47	1.20
Dollar Shares												
All Except US												
Current rates	71.1	61.7	69.0	69.6	82.3	61.5	77.3	68.1	51.6	61.2	73.7	92.0
Constant rates	62.3	53.2	63.2	67.9	81.4	61.5	76.9	69.4	56.7	67.9	79.1	92.6
All Except US & International												
Current rates	70.0	60.3	62.2	63.0	70.5	58.1	77.4	64.8	47.3	65.0	68.9	91.4
Constant rates	61.2	51.8	56.0	60.2	69.3	58.1	77.0	66.2	52.3	71.4	74.6	92.0

Source: Basic data from Table 11; Deutschemark issues at constant exchange rate are dollar equivalents converted into Deutschemark at average exchange rates for the then-current years and converted back into dollars at the average exchange rate for 1975; exchange rates from *International Financial Statistics*.

Table 13

Exchange-Rate Regimes of Developing Countries, Distributions in 1974 and 1981

(percentages of total)

Exchange-Rate Regime	1974	1981
By Number of Countries:		
Dollar peggers	62.2	32.2
Sterling peggers	9.2	0.9
French franc peggers	13.3	12.2
Other currency peggers	1.0	2.6
SDR peggers	—	12.1
Own basket peggers	—	15.6
Using indicators	—	2.6
Having other exchange-rate regimes	14.3	21.7
By Value of 1978 Imports:		
Dollar peggers	72.3	20.0
Sterling peggers	5.4	*
French franc peggers	2.6	2.5
Other currency peggers	*	*
SDR peggers	—	7.8
Own basket peggers	—	20.4
Using indicators	—	7.5
Having other exchange-rate regimes	19.6	41.7

Source: Kenen (1982b), Table 3.

Detail may not add to total because of rounding.

* Less than 0.1 percent.

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